Conclusion. Treatment time is a factor that could influence on SBRT uncertainty. In our experience, set-up time is longer the first day of treatment than in the rest of fractions. Dynamic arc therapy is faster than treatment with only fixed fields. Immobilization with Bodyfix® gives enough accuracy, being our PTV margin of 0.5 cm appropriate according to our data.

http://dx.doi.org/10.1016/j.rpor.2013.03.558

Stereotactic body radiation therapy for lung tumours: Initial experience of a centre

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Purpose. To analyze our experience treating lung tumours with stereotactic body radiation therapy (SBRT), emphasising what concerns to toxicity.
Materials and methods. We evaluate our results treating patients with stage I lung cancer or lung metastases with SBRT from August 2011 to December 2012. We describe toxicity using the Common Terminology Criteria for Adverse Events v3.0 (CTCAE). We evaluate the local control (LC), regional relapse (RR), distant progression (DP) and overall survival (OS).
Results. We have treated eighteen patients in that period with a median age of 74 (54–87). 22% were women and 78% men. The ECOG performance status was 1 in 72% patients, 2 in 22% and 3 in 5%. Thirteen patients had stage I lung cancer (72%) and five had lung metastases (28%). With a median follow up of 6.5 months, 6 patients developed grade 1 pneumonitis (33%) and 2 patients grade 2 pneumonitis (11%). Two patients had grade 1 chest wall pain. Only one grade 1 dermatitis was observed. The LC was of 100%. Between patients with stage I lung cancer, RR was observed in 6% and DP in 13%. OS was 89%.
Conclusions. With a short median follow-up time our results are coherent with published data, achieving excellent local control with distant progression as first relapse in patients diagnosed of stage I lung cancer. SBRT was well tolerated with no severe toxicity observed.

http://dx.doi.org/10.1016/j.rpor.2013.03.559

Stereotactic radiosurgery in patients with multiple intracranial meningiomas

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Background. Stereotactic radiosurgery (SRS) delivers a potent, highly focused dose of radiation to the tumor while sparing the surrounding normal tissues.
Aim. The purpose of this study is to assess the outcome of patients with intracranial meningiomas treated with SRS.
Methods. A total of 73 patients with 221 benign meningiomas treated with SRS and followed up for more than a year were reviewed between 1991 and 2005. Fifty patients (68%) were treated with SRS to the primary meningioma while 23 (32%) patients received SRS to the relapses adjacent or distant from the site of the initial meningioma that was previously treated with surgery alone. Mean tumor margin dose was 14 Gy (range, 10–16). SRS was delivered after surgery in 117 meningiomas (55 patients).
Results. The median age at diagnosis was 47 years old (range, 16–74) and the median follow-up 5.8 years (range, 1–13.6). The 3- and 5-year overall survival rates for all patients were 95% and 90%, respectively. The mean gross tumor volume decreased from 4.17 cm^3 to 3.23 cm^3 after SRS ($P = 0.057$). Twenty-two (10%) meningiomas increased after SRS. In addition, clinical symptoms improved in 36% and remained stable in 45%. With regard to morbidity of SRS, only 7 patients (9.6%) had late complications, including: edema ($N = 4$), brain necrosis ($N = 4$), gliosis ($N = 1$), and paresis of the III pair ($N = 1$). There was no treatment-related mortality.
Conclusions. SRS for patients with multiple intracranial meningiomas is effective yielding a high local tumor control, whereas the treatment-related morbidity remains low.

http://dx.doi.org/10.1016/j.rpor.2013.03.560

Stereotactic radiotherapy on metastasis using eXaFrame and eXaSkin with VMAT–IGRT

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Introduction. Whole-brain radiation therapy (WBRT) combined with boost on the metastases has demonstrated to improve the results of the treatment in selected patients in contrast to single WBRT.